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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,729	01/19/2000	Baik-hee Han	Q57577	3502
7590	12/29/2004		EXAMINER	
Sughrue Mion Zinn MacPeak & Seas PLLC 2100 Pennsylvania Avenue NW Washington, DC 20037-3202			NATNAEL, PAULOS M	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/487,729	HAN, BAIK-HEE
	<b>Examiner</b>	<b>Art Unit</b>
	Paulos M. Natnael	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 July 2004.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-5,7 and 8 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Shim, U.S. Pat. No. 6,344,882.

Considering claim 1, Shim discloses all claimed subject matter, note;

- a) the claimed key input for inputting a channel number according to a user's selection, is met by Key Matrix 15, (Fig. 6). (see col. 7, lines 38-40)
- b) the claimed a tuner for tuning to a channel corresponding to the channel number selected by the key input, among received broadcasting signals, is met by Tuner 11, (Fig. 6);
- c) the claimed a signal processor for processing a composite video signal of said channel tuned and output from the tuner, is met by IF signal processing unit 12, (Fig. 6);

d) the claimed a memory for storing the channel number is met by Memory 17, (Fig. 6);

e) the claimed a controller for receiving the channel number output from the key input and storing the channel number output from the key input in the memory while controlling the tuner to tune to a broadcasting channel corresponding to the received channel number, is met by Microcomputer 18, (Fig. 6).

f) the claimed wherein the controller receives the signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and, stores the corresponding broadcasting channel number in the memory only if a broadcasting signal is present, is met by the disclosure that "A synchronization detection unit 15 to detect the synchronous signals outputted from intermediate frequency signal processing unit 12 in order to discriminate whether there exist any broadcast signals at the time of channel switching and supply them to microcomputer 18. Microcomputer 18 outputs a series of tuning data from the automatic channel storage mode to tuner 11 and drives simultaneously the speed-up drive units 19 and 20 for high speed tuning. Microcomputer 18 discriminates whether there exist any broadcast signals on the pertinent channel on the basis of the IF AGC supplied from intermediate frequency signal processing unit 12 through the level shifter 22. If a broadcast signal is discriminated, then microprocessor 18 stores such channel data in the memory 17. (Col. 6, lines 43-58) {emphasis added by examiner}

Considering claim 5, see rejection of claim 1, (claim 5 being different only by the single word "automatically" storing the channel number, in limitation number 5, which the applied reference of Shim et al. clearly teaches).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3,4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shim et al. U.S. Patent No. 6,344,882 in view of Hamadate, U.S. Patent No. 5,969,769.

Considering claim 3, Shim discloses the following claimed subject matter;

c) the claimed a display for displaying a signal output from the mixer is met by CPT 14, Fig. 6.

Except for;

- a) the claimed a character signal generator for generating a character signal for indicating memorization of the channel number selected by the key input.
- b) a mixer for mixing a signal output from the signal processor with a signal output from the character signal

Regarding a) and b), Shim et al. does not specifically disclose a character signal generator and mixer for mixing those signals from signal processor 12 and characters generated from a generator. However, it is notoriously well known in the art of television broadcasting to display the channel selected by the user for the viewer's convenience, i.e., in order to check the correctness of the selected channel number. It is also well known in art of television that such character display is superimposed on the video image.

Hamadate discloses a television set having a multiple-division screen. Hamadate discloses a character generating part 116, (fig.1) which generates and outputs characters to be selected by the switching part 106 and then superimposed on the image displayed on the displaying part 112 (fig.1).

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Shim et al by providing the character generating part of Hamadate in order to generate desired characters and display the characters on the display 14, so that the viewer would be able for example check whether the selected channel number is the correct or desired channel number.

Considering claim 4, the claimed wherein the controller controls the character signal generator to generate a current broadcasting channel number and a character signal indicating memorization of the channel number so that said user can easily identify the memorized broadcasting channel is met by the Microcomputer 18. (see also rejection of claim 3)

Considering claim 7, see rejection of claim 3.

Considering claim 8, see rejection of claim 4.

***Response to Arguments***

5. Applicant's arguments filed 7/19/04 have been fully considered but they are not persuasive.

**Applicant's Arguments**

a) Because the Examiner previously rejected claim 1 under 35 U.S.C. § 102(e) as allegedly being anticipated Shim et al. Office Action dated August 28, 2002), wherein the rejection was subsequently withdrawn, Applicant's representative conducted a telephone interview with Examiner P. Natnael on June 18, 2004 to request an explanation as to why the Examiner is again applying this reference, in particular given that the scope of claims 1 and 5 are now narrower than when the Examiner's initial application of Shim was traversed. During the interview, Applicant's representative discussed claim 1, as an exemplary claim, in explaining the operation of variously illustrative embodiments of the claimed invention. Applicant's representative also pointed out that the Applicant had already successfully distinguished Shim from the claimed invention once before citing Applicant's Response Under

37 C.F.R. § 1.111 filed on November 20, 2002). Furthermore, Applicant's representative again distinguished the claimed invention from Shim, as well as newly applied Hamadate, for Examiner Natnael's benefit. Based on the discussions between the Examiner and Applicant's representative, the Examiner agreed to reconsider his reliance on Shim and Hamadate, upon Applicant's filing of a response to the non-final Office Action.

b) To the contrary, the microcomputer 18 does not store channel numbers output from a key input instead, Shim discloses that the microcomputer 18 stores channel numbers based on an automatic channel scanning process (Shim: col. 7, lines 4-34; and Fig. 10). In this regard, Shim is not substantially different from the prior art described on page 1 of Applicant's specification. Furthermore, the aspect of Shim that describes individually tuning a specific channel in response to a user's key input (see, e.g., Shim: col. 9, lines 1-35\*, and Fig. 11) does not disclose storing the channel information.

c) Applicant's claim 1 further recites that the controller receives a signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory only if said broadcasting signal is present." in the Office Action, the Examiner alleges that these features of claim 1 are met by the disclosure of Shim (see, e.g., Shim: col. 6, lines 44-49) that a synchronization detection unit 15 detects the synchronization signals output from the intermediate frequency signal processing unit

12 in order to discriminate whether there exists any broadcast signals at the time of channel switching and supplies them to the microcomputer18 (Office Action: page 3).

d) The portions of Shim relied on by the Examiner, however, relate to an automatic channel scan and not to a user using a key input to input a channel number according to the user's selection. This is evident from the sentence immediately preceding the second portion of Shim cited by the Examiner: "Microcomputer 18 outputs a series of tuning data from the automatic channel storage mode to tuner 11 and drives simultaneously the speed-up drive units 19 and 20 for high speed tuning." (Shim: col. 6, lines 50-53). Thus, because the microcomputer 18 outputs a series of tuning data, the portions of Shim relied on by the Examiner do not relate to a situation in which a user enters a channel number via a key input, but rather that these portions relate to an automatic frequency scan.

e) Furthermore, Applicant's representative again distinguished the claimed invention from Shim, as well as newly applied Hamadate, for Examiner Natnael's benefit. Based on the discussions between the Examiner and Applicant's representative, the Examiner agreed to reconsider his reliance on Shim and Hamadate, upon Applicant's filing of a response to the non-final Office Action.

Examiner's Response

a) The examiner agreed to carefully reconsider the rejection. The Examiner did not promise anything else. After carefully reconsidering the claims as claimed, the application of the Shim et al reference is still found to be relevant and, hence, it has been repeated here again. In other words, whether the reference was used before or not, the examiner feels this reference is applicable to the claims as claimed.

b) In contradistinction to the assertion made by the attorney, Shim et al do NOT use, anywhere in the reference, the term "automatic channel scanning process." This is only the interpretation of Applicant's representative. Shim et al. teach that, "The automatic channel storage procedure begins when a televiwer outputs a pertinent key signal on the key matrix 16 in order to carry out the automatic channel storage. Microcomputer 18 perceives the signal and drives speed-up drive units 19 and 20, and outputs the channel data to tuner 11 to select a channel." (col. 7, lines 37-43) (Note that Shim et al disclose "to select a channel", i.e., only one channel, from the input key output by the choice of the viewer. They didn't say the viewer selects channel 1 or 3 for auto channel scan. In fact, nowhere do Shim et al. mention, even once, automatic channel scanning!) Then, "Microcomputer 18 can, after outputting the tuning data to tuner 11, discriminate at high speed (15 ms) whether there exist broadcast signals in the presently selected channel on the basis of the QID supplied within 15 ms, as shown in FIG. 7(c). If it is discriminated after confirming whether there exist any broadcast signals in the channel selected

***through the described process that a broadcast signal does exist, then the tuning data of such channel is stored in memory 17.*** (col. 8, 11-29) Therefore, the argument that Shim et al. "stores channel numbers based on an automatic channel scanning process", is clearly unpersuasive.

c) Again, the examiner wishes to clear up the following misinterpretation or misreading of the reference of Shim et al. by Applicant's representative. Shim et al. repeatedly disclose "auto channel storage" mode and NOT "auto channel scan". Shim et al. repeatedly use the phrase "A high speed automatic channel storage apparatus" not automatic channel scan. In fact, as indicated above, nowhere do Shim et al., anywhere, use the term "automatic channel scan" or "auto channel scan" or "automatic frequency scanning". Despite this fact, applicant's representative continues to incorrectly refer to Shim et al.'s "auto channel storage" as "auto channel scan". Storage and Scan are two different terms and have two distinctly different applications. Therefore, as disclosed on column 7, lines 37 of the Shim et al. reference, "The automatic channel storage procedure begins when a televiewer outputs a pertinent key signal on the key matrix 16 in order to carry out the automatic channel storage. Microcomputer 18 perceives the signal and drives speed-up drive units 19 and 20, and outputs the channel data to tuner 11 to select a channel." (col. 7, lines 37-43) Note that Shim et al disclose "to select a channel", i.e., only one channel, from the input key output by the viewer. They DO NOT say the viewer selects channel 1 or 3 for auto channel scan. Furthermore, Shim et al. discloses, "Microcomputer 18 can, after outputting the tuning data to tuner 11,

discriminate at high speed (15 ms) whether there exist broadcast signals in the presently selected channel on the basis of the QID supplied within 15 ms, as shown in FIG. 7(c). If it is discriminated after confirming whether there exist any broadcast signals in the channel selected through the described process that a broadcast signal does exist, then the tuning data of such channel is stored in memory 17.

Once the discrimination is done, the next channel is immediately selected and the said process is carried out repeatedly until all channels have been checked. When the auto channel storage operation is complete, a high potential is outputted from the QSC of microcomputer 18. The high potential turns on transistors Q1 and Q2 which turn off speed-up drive units 19 and 20, so that the condensers C1 and C2 are connected to the ground terminals and carry out a stable AGC operation in normal state. " (col. 8, 11-29)

[emphasis added]

Thus, the argument that the system of Shim et al. disclose automatic channel scanning is without merit and is unpersuasive.

d) see discussion of Part C above.

e) as to the rejection in view of Hamadate, as the rejection indicates Shim et al. do not specifically disclose a character signal generator and mixer for mixing those signals from signal processor 12 and characters generated from a generator. However, it is notoriously well known in the art of television broadcasting to display the channel selected by the user for the viewer's convenience, i.e., in order to check the correctness of the selected channel number. It is also well known in art of television that such

character display is superimposed on the video image. (Thus, since Shim et al. do not disclose the claimed methods, but are nonetheless well known in the art, the Examiner used Hamadate to show as the teaching reference that can modify the Shim et al. reference) Hamadate discloses a television set having a multiple-division screen. Hamadate discloses a character generating part 116, (fig.1) which generates and outputs characters to be selected by the switching part 106 and then superimposed on the image displayed on the displaying part 112 (fig.1). It would have been obvious to the skilled in the art to modify the system of Shim et al by providing the character generating part of Hamadate in order to generate desired characters and display the characters on the display 14, so that the viewer would be able for example check whether the selected channel number is the correct or desired channel number. Hence, the argument against Hamadate is unpersuasive.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN  
December 22, 2004



PAULOS M. NATNAEL  
PATENT EXAMINER